

**Pohnpei, Federated States of Micronesia
Takaieu and Dehpehk Communities**

Training and Assessment Report



**Socioeconomic Monitoring Guidelines for Coastal Managers in Pacific
Island Countries
(SEM-Pasifika)**

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Workshop Summary

SEM-Pasifika is a set of community-based socioeconomic monitoring guidelines developed specifically for coastal managers in Pacific Island countries. Since its launch in 2008, several SEM-Pasifika trainings have been conducted throughout Micronesia. Assessments have taken place in the CNMI, Palau, the Marshall Islands, Chuuk, Pohnpei, Kosrae and Yap in the Federated States of Micronesia. Between February 1-12, 2016, Pohnpei was host to the state's second SEM-Pasifika training. Trainees included participants from the Dehpehk and Takaieu communities, local NGOs and government agencies. For the training, the following objectives and outcomes were identified:

Objectives:

- To build socioeconomic monitoring capacity of the participants based on SEM-Pasifika
- Introduce quantitative data analysis using EXCEL, provide hands-on exercises of collected data when possible
- To communicate results of data analysis and effectively communicate data visually
- To be able to use analyzed data in conservation planning and adaptive management
- Complete a socio-economic assessment for Dehpehk-Takaieu
- Produce an assessment report for Dehpehk-Takaieu
- Pilot MC Indicators as appropriate for Dehpehk-Takaieu

Outcomes:

- Participants trained to undertake a socioeconomic assessment with some guidance from trainers
- Participants gain experience in EXCEL to code, enter and run descriptive data analysis
- Understand and appreciate mixed research methods with quantitative and qualitative approaches
- Greater understanding and appreciation of socioeconomic monitoring as an important tool to improve site management of the coastal and marine areas in the Pacific region
- Commitment of participants to future SEM-Pasifika activities, possible sharing of information and skills with greater PIMPAC regional group
- Socio-economic assessment completed and data analyzed for Dehpehk-Takaieu
- Report assessment results back to Dehpehk-Takaieu community

Prior to conducting the two-week workshop, trainers consulted with Pohnpei partners to determine the site most appropriate for the training and assessment. In response to requests from Conservation Society of Pohnpei and the Dehpehk and Takaieu communities, Dehpehk and Takaieu were selected as the focus of the training and assessment.

Using the Dehpehk-Takaieu Marine Protected Area Five Year Management Plan as a guide, the team identified the main issues to address in the assessment. During the ten-day workshop, participants visited the site three times. First they travelled to Dehpehk and Takaieu to conduct focus group and key informant interviews to gain a better understanding of the site and the community. The team then used the information to develop a household survey questionnaire which sought to gather information and answer questions regarding the communities. Participants then implemented the household survey from every home. This involved travelling to the communities on two days, (Friday and Saturday) to conduct household surveys.

The training was also host to the implementation of the Micronesia Challenge Socioeconomic Indicators in Pohnpei. During the workshop, the MC indicators which were identified at the first Micronesia Challenge Socioeconomic Measures Meeting in Palau in 2012, were field tested in the Dehpehk and Takaieu communities.



Background

The socioeconomic assessment was conducted in Dehpehk and Takaieu to provide managers and the community with information regarding the community's knowledge, concern, and opinions about their natural environment. The project was also taken on in support of the conservation area's shared vision:

For our communities of Dephek and Takaieu to be happy with good quality of life and abundant resources.

Site Description:

Pohnpei is a state within the Federated States of Micronesia. The total population of the state, according to the 2010 census, is 36,196. For the Dehpehk and Takaieu communities the information from the census is as follows:

Village	Total Population*	Total # of Households*	# of Household Surveyed
Dehpehk*	19	6	30**
Takaieu*	115	21	27**

*According to 2010 Census

** Because many people from Dehpehk and Takaieu live on the main island of Pohnpei in U Municipality, in the communities of Nanwelin Rohi and Lukoak, adjacent to the MPA, it was agreed that these households, which were identified by the chiefs, would also be included in the assessment.

Dehpehk and Takaieu have designated areas of water off of the community's shores as no-take. The no-take zone, which is laid out in the Marine Management Plan is intended to restrict fishing pressure and provide a core zone that can potentially "re-seed" the open access areas. As stated in the Marine Management Plan, the Pohnpei State Legislature "finds that certain areas of the terrestrial and marine environment possess conservation, cultural, recreational, ecological, historical, research, educational, or aesthetic qualities which give them special national and international significance, and that protection of these special areas is necessary for the social, cultural, and economic well-being of future generations. The Dephek and Takaieu Sanctuary is designated by Pohnpei Legislature as having the above mentioned characteristics and requires this special protection. Through the efforts from the community leaders of Dephek and Takaieu the State has made this designation."¹



¹ Dehpehk and Takaieu Marine Protected Area Five Year Management Plan.

Methodology

Indicators

The first task of the team was to identify objectives for the assessment. The team used the Management Plan as a guide to develop the assessment objectives. Each objective selected directly reflected the objectives laid out in the management plan (with the exception of the MC Indicators).

After identifying the objectives for the assessment, the team identified indicators by which to gather information most useful to address the objectives. The indicators helped to guide the development of questions for the key informant interviews and the household surveys. During the course of the training, the team concluded that several of the indicators listed in the management plan (particularly biophysical indicators) could best be addressed through other means of collection. As a result, the indicators selected to guide the assessment were those which could help measure the socioeconomic aspects of the objectives. The objectives and indicators addressed in the Dehpehk-Takaieu assessment were:

OBJECTIVES	INDICATORS
<ul style="list-style-type: none">• Explore household livelihood activities and opportunities for alternative income generating activities• Understand community's awareness of the benefits and impacts of the MPA• Understand community's awareness of and compliance with rules, regs, and boundaries of the MPA• Understand fishing and harvesting activities and their impacts in and around the MPA• Understand key species for household consumption and sale and their perceived health	<ul style="list-style-type: none">• Dependence on coastal and marine resources (C5)• Alternative and supplementary livelihoods (C12)• Monetary value of goods and services (C7)• Management effectiveness (M16)• Management benefits (M17)• Awareness of rules and regulations (M11)• Change in violations and illegal activities related to fishing, harvesting, and use of natural resources (MC 4)• Coastal and marine activities (C1)• Perceived threats to coastal and marine resources (T3)• Perceived resource conditions (T2)• Key species for household consumption and sale• Perception of change in food availability (MC1)



Data Collection

Following SEM-Pasifika protocol, after identifying assessment objectives and indicators, the Pohnpei team developed questions to pose to key informants and focus groups. The team identified community members, resource managers and others who were thought to have information that would provide valuable insight in to the situation at the site. Key informant interviews were conducted in Kolonia and in Dehpehk and Takaieu. They included CSP Director, Eugene Joseph; Administrator of Pohnpei's Office of Fisheries & Aquaculture Joseph Saimon; Chief of Fish and Wildlife Tony Pernet, Chief of Dehpehk Mihkel Bernardo and the Chief of Takaieu Pedrus Primo. In addition the team conducted two Focus Groups: Fishers and Women.

Following the key informant interviews and focus groups, the team developed the household survey. The survey was made up of questions aimed at addressing the objectives and indicators for Dehpehk and Takaieu.

The survey was translated and pre-tested on randomly selected individuals in Kolonia. Following the pre-test, the team reconvened and edited the survey based on the results of the pre-test.



After finalizing the translation, the team implemented the survey in Dehpehk, Takaieu, Nanwelín Rohi and Luhkoak. During the initial phase of the workshop, the Pohnpei team determined that a household census would be the most appropriate survey method for the municipality.

Survey team members walked through each village and attempted to survey every occupied household. At each household, a random household member (above the age of 16) was asked if they would participate in the survey.

Data Analysis

Following survey implementation, the team coded and input survey data into a data sheet designed in Excel. After data from all surveys had been inputted, basic analysis was conducted and participants discussed the results.

Communicating Results

Following data analysis, the Pohnpei team selected what information they would include in the community presentation. Because the survey was extensive, it was not feasible to present all of the responses at the community presentation. Instead, highlights were selected that the team felt would be most interesting and useful for the general audience expected at the community event. Through consultation with the village chiefs, it was determined that three final presentations would be given, all with the same information, in Dehpehk, Takaieu and Nanwelín Rohi. The presentations were held at the chief's homes.

Over 60 community members attended the three presentations and listened as the team used PowerPoint to share the results. Following the presentation, community members and leaders asked a number of questions regarding the results.

Recommendations for Management

The results of the assessment led to significant discussion among the team and with the audience at the community presentation, these were:

- Increase awareness of resource health
- Maintain level of awareness of rules and regulations
- Further explore opportunities for alternative livelihoods and support community efforts

- Increase community involvement in education efforts
- Increase awareness of threats from overfishing
- Support community in addressing their highest threat –trash
- Develop detailed action plan to guide CCOs and community members in implementation of management plan



Challenges and Recommendations:

As was mentioned in a number of the post-training assessments, the time allocated (two weeks) is not enough to adequately cover all of the material presented. The material is dense and when coupled with the field work leads to rushing through important aspects and not being able to adequately cover all that is laid out in the agenda. As a result, future trainings should consider (when starting on a Monday) taking an extra day to cover the materials included in the first week and implementing household surveys on Saturday and Monday rather than Friday and Saturday. This would allow for more time to pre-test the survey and work on translation, both of which take much longer than the time provided in the agenda attached.

Although the training team started out with the intention to get daily feedback from the group, as the first week progressed and time ran short, these daily check-ins were left out of the workshop. This is an important opportunity to ensure that the team and trainers are on the same page and it is recommended that future workshops ensure that these check-ins are included on a daily basis.

ATTACHMENTS:

Final Survey with Results

Agenda

Survey ID: **57 SURVEYS CONDUCTED**

Enumerators:

Hello, my name is ____ and this is/are _____. I am from _____ and I am working collaboratively with CSP, MINA, MCT, OFA, and Dehpehk and Takaieu. We are doing a socioeconomic assessment project for Takaieu and Dehpehk in which CSP is taking a lead on. We would like to ask some questions about what you think of the natural resources and management in Dehpehk and Takaieu that will be used to help the management for the area. This information is confidential. This survey will take about ____ minutes to answer. Would you be willing to answer some questions?

If yes, continue. If no, do not continue with questionnaire.

Kaselehlieh maing, ei tungoal ahd _____ oh mwahnakapw / peinakapw me patehng ie rahnwet eh tungoal ahd _____. I patohsang _____ oh mwahnakapw/peinakapw patohsang _____ oh se patoh wan kalelapak kei me pahn kak alehdi kupwuromwi ohng kamwahulahn wiepen doadoahk kan me tohn lopidi pahiou oh Dehpehk/ Takaieu sapwelimanki de tungoalenki ohng wasahn nahk en Dehpehk oh Takaieu. Roprop wet se patohwan patkihieng palih kei me rasehng MCT, MINA, CSP, OFA oh irail weliepen Dehpehk oh Takaieu kan me iang patehng doadoahk wet. Kupwuromwi kan karos me pahn sansal e pahn sohte wia mehn kasansal ehu ohng wehi pokon ahpw e pahn wia mehn iren kaweid irail tohn kousan en Dehpehk oh Takaieu iangahki palih kan karos me sansalehr powe pwe irail en kak kamwahuihla wiepen doadoahk de kairoir kan me pato nan sapwelimarail de arail tungoal plan en doadoahk. Komw kuprur ketiki roprop wet? (ma ei ah komw doula, ma soh ah komw patohwan kalahngan komwi eri douluhla ni ehu ihmw)

1. Komw wia mehn Dehpehk de Takaieu? I am from
 - a. Dehpehk **30 (53%)**
 - b. Takaieu **27 (47%)**
2. *Ohl de Lih Sex (do not ask)*
 - a. Ohl Male **36 (63%)**
 - b. Lih Female **21 (37%)**
3. Komw sounpar depe ansouet? Age
 - a. 16-24 **5% (3)**
 - b. 25-34 **19% (11)**
 - c. 35-44 **11% (6)**
 - d. 45-54 **40% (23)**
 - e. 55-64 **16% (9)**
 - f. 65-74 **7% (4)**
 - g. 74 and over **2% (1)**

Komw doadoahk en wai? Ma soh ah komw kak sawaski mwomwen omwi kin koadoahkehda sapwelimwomi sent? What do you for a living?

Wiepen momour Livelihood	Elen Sent Primary (<i>main source of income-only one answer</i>) [n=57]	Songen elen sent teikan Secondary (<i>as many as apply</i>) [n=57]
4. Elen sent sang doadoahk en wai Salary from employment	12% (7)	2% (1)
5. Laid Fishing	23% (13)	23% (13)
6. Poad sakau Sakau Farming	40% (23)	37% (21)

7. Peneinei me patopato liki Off island relatives	5% (3)	18% (10)
8. Mwohni en imwin sounpwong	9% (5)	5% (3)
9. Social security / pension		
10. Netin pwuh Betelnut	2% (1)	23% (13)
11. Netin tehnpwoht Recycling	0% (0)	16% (9)
No answer	5% (3)	33% (19)
12. Sohngte teikan Other:	Housewife 2% (1)	Small business 2% (1)
13. Sohngte teikan Other:	Family 2% (1)	Sponge farming 2% (1)

14. Mehnia mwomwodiso komw iang towe? What is your religion?
a. Kahdlik Catholic 87.7% (50) b. Prohs Protestant 1.8% (1) c. SDA 0% (0) d. Mormon 10.5% (6)
e. Other: _____
15. Mehnia dakehn sukuhl komw lel lie? What is your highest level of education?
a. Elementary School 80.7% (46) b. High school 10.5% (6) c. College 8.8% (5)
16. Aramas depe kin koukousoan nan tehnpesemwi? How many people live in your household?
a. 1-5 57.1% (32) b. 6-10 41.1% (23) c. over 10 1.8% (1)
17. Komw kin laid de sei menihke? Do you fish or harvest?
a. Ei Yes (if yes, continue to Q# 18) 70.2% (40) b. Soh No (if no, skip to Q# 22) 29.8% (17)
18. iawen dod en omw kin ketla laid de sei menihke? How often do you fish or harvest? [n=40]
a. Rahn karos Everyday 5% (2)
b. Pak 3-6 nan week ehu 3-6 times per week 10% (4)
c. Pak 1-2 nan week ehu 1-2 times per week 47.5% (19)
d. Ekei te pak nan erein sounpwong ehu A few times a month 35% (14)
e. Ekei te pak nan erein pahr ehu A few times a year 2.5% (1)
19. Ansou da komw kin ketla laid? What time of day do you usually fish? [n=40]
a. Nirahn Day 27.5% (11) b. Nihpwong Night 20% (8) c. Nirahn oh nihpwong Both day and night 52.5% (21)
20. songen wiepen laid da komw kin wia? What fishing methods do you practice? (Do not read out options. Circle as many answers as they provide) [n=40]
a. Uhk Net fishing 42.5% (17)
b. Kesik Spear fishing 55% (22)

- c. Sei menihke Harvesting 22.5% (9)
- d. Epiep Line fishing 35% (14)
- e. Wiepe teikan Other: indil [night gleaning of fish/lobster] 2.5% (1)

21. *Songen mwahmw da de menihke da komw kin **kalapw** koledi de saikada ma komw kin ketla nansed?*

What **key** species do you catch or harvest? (**Do not read out choices. Circle as many answers as they provide**) [n=40]

- a. Pworin mwomw rabbit fish 75% (30)
- b. Pahsu clams 12.5% (5)
- c. Kerker rudder fish 45% (18)
- d. Elimoang mangrove crab 10% (4)
- e. Mwomw mei de mwahu parrot fish 52.5% (21)
- f. Mwanger grouper 52.5% (21)
- g. Langon sea cucumber 15% (6)
- h. Werer sea cucumber 27.5% (11)
- i. Darop, wakapw de tamorok Surgeon fish 32.5% (13)
- j. Arong Trevally 35% (14)
- k. Samwei de ikem Emperor 67.5% (27)
- l. Lipwei Bivalve 22.5% (9)
- m. Songen mwahmw de menihke teikan: Unicornfish 5% (2); crab 5% (2); coby 2.5% (1); goatfish 2% (1)
- n. Songen mwahmw de menihke teikan: _____

22. *Songen kahpwal da me komw mwahngih de patowan me pahn kakete kahpwaliala nan lepiinsed en Dehpehk oh Takaieu? What are the issues affecting marine resources for Dehpehk and Takaieu? (**Do not read out choices. Circle as many options as they provide**). n=57*

- a. Kelen pwihk ni oaroahr Pig pens 46% (26)
- b. Imwen kainen Outhouses 33% (19)
- c. Kihd Trash 56% (32)
- d. Peilahn pwehl Erosion 32% (18)
- e. Laid wiakau Overfishing/harvesting 16% (9)
- f. Laid wasahn nahk Fishing/harvesting in the MPA 16% (9)
- g. Songen kahpwal teikan Other: Coral mining 1.8% (1); Nightfishing 1.8% (1); Heavy rain 7% (4); Dead/algae-covered coral 7% (4); Dredging 3.5% (2); Poaching/Clorox 1.8% (1); high turbidity 1.8% (1); No inverts around shoreline 3.5% (2)

I pahn wadekehng komwi songsongen mwahmw oh menihke kei ah komw kalahngan oh sapeng ma e wia mehn net, sak de tungoal oh ma e pil kin daodahkehng sapwelimatail taihk. (wadekada eden mwahmw oh menihkeh kan karos me sansal pah)

I am going to ask you some questions about species of importance for your household consumption and sale. Please rank how important these species are for your household. **(Read each option and answer for consumption, sale, and traditional use.) n=57**

	Consumption: Sak de Tungoal				Sale: Netla				Traditional use: Tiahk			
	Low: tikitik	Med: ekis laud	High: udahn laud	NA: sohte kin wiahki mehn sak	Low: tikitik	Med: ekis laud	High: udahn laud	NA: sohte kin wia mehn net	Low: tikitik	Med: ekis laud	High: udahn laud	NA: sohte wia mehn doahd oahk ehng tiahk
23. Werer Sea cucumber	32%	9%	21%	39%	12%	2%	0%	86%	11%	9%	4%	77%
24. Langon Sea cucumber	33%	9%	21%	37%	7%	5%	2%	86%	12%	4%	4%	81%
25. Pworin mwomw Rabbit fish	12%	21%	49%	18%	5%	12%	12%	70%	16%	18%	7%	60%
26. Kerker Rudder fish	18%	18%	42%	23%	7%	7%	19%	67%	12%	16%	11%	61%
27. Elimoang Mangrove crab	28%	12%	25%	35%	7%	7%	4%	82%	12%	8%	2%	77%
28. Mwomw mei de mawhu Parrot fish	23%	16%	44%	18%	12%	9%	25%	54%	19%	12%	4%	65%
29. Pahsu Clams	23%	12%	21%	44%	9%	2%	2%	88%	12%	2%	4%	82%
30. Mwanger Grouper	18%	21%	33%	21%	7%	5%	12%	75%	12%	7%	5%	75%
31. Darop,wa kapw Surgeon fish	16%	14%	39%	32%	9%	2%	9%	81%	9%	11%	5%	75%
32. Arong Trevally	16%	16%	37%	32%	7%	9%	9%	75%	9%	9%	4%	79%
33. Samwei de ikem Emperor fish	12%	23%	39%	26%	11%	11%	9%	70%	19%	11%	4%	67%
34. Lipwei Bivalve	26%	11%	21%	42%	16%	5%	2%	77%	12%	5%	0%	82%
35. Poad rahr Coral	0%	5%	11%	84%	2%	5%	4%	89%	0%	2%	2%	96%
36. Poad	2%	5%	9%	84%	2%	7%	4%	88%	2%	0%	2%	96%

lihmw Sponges												
37. Sakau:	12%	14%	42%	32%	9%	16%	44%	35%	14%	9%	44%	33%

I pahh wadekehng komwi songsongen mwahmw kei oh menihkeh kei ah komw kupwur kalahngan oh sapeng ma momouren mwahmw kan oh menihkeh kan mwahu de soh. I am going to ask you some questions about the health of your resources. Please say if they are very unhealthy, unhealthy, healthy, very healthy, or I don't know. **n=57**

	Udahn sohte mour mwahu-Very Unhealthy	Sohte mour mwahu-Unhealthy	Mour mwahu-Healthy	Udahn mour mwahu-Very Healthy	I don't know
38. Werer-Sea cucumber	16%	25%	14%	4%	42%
39. Langon-Sea cucumber	18%	19%	11%	7%	46%
40. Pworin mwomw-Rabbit fish	4%	26%	30%	9%	32%
41. kerker-Rudder fish	2%	21%	25%	7%	46%
42. elimoang-Mangrove crab	9%	18%	19%	7%	47%
43. mwomw mei/mahu-Parrot fish	2%	21%	26%	12%	39%
44. pahsu-Clams	14%	21%	12%	9%	44%
45. mwanger-Grouper	2%	18%	25%	11%	46%
46. darop/pakas-Surgeon fish	2%	14%	28%	11%	46%
47. arong-Trevally	2%	14%	30%	11%	44%
48. samwei/ikemEmperor fish	2%	14%	30%	14%	40%
49. lipwei-Bivalve	12%	19%	16%	9%	44%
50. rahr-Corals	12%	21%	9%	7%	51%
51. lihmw-Sponges	12%	12%	11%	7%	58%

52. *Komw mwahngih kosoned en wasahn nahk en Dehpheh oh Takaiau kan?* Are you aware of the rules and regulations of the Marine Protected Area? **(If no, skip to Q# 61) n=57**

- a. Ei Yes **81% (46)**
- b. Soh No **19% (11)**

53. *Songen wiepen kapehse da komw mwahngiasang kosoned en wasahn nahk en Dehpheh oh Takaiau?* How do you get information about the rules and regulations of the MPA?

(Do not read out options. Circle as many options as they provide) n=46

- a. Rehdio Radio **17% (8)**
- b. Kaweid me kin patpato seli nan kousoan kan Community Outreach **85% (39)**
- c. Nan dipwisou en kapehse en wai kan Internet **4% (2)**
- d. Ni sain kan me kin langalang seli kan Signs **24% (11)**
- e. Rehn irail kaun en wehi de kousapw kan Community meetings **24% (11)**
- f. News News **0%**
- g. Sohngen mehn kapehse tei kan Other: **CSP 4% (2), Relatives 2% (1), School 2% (1), CCO 2% (1)**

I pahn wadekehng komwi iren mesen kosoned kei ah komw kupwur kalahngan oh sapeng ma e mehleh de soh. I will read you a list of rules and regulations of the MPA, please indicate if it is true or false.

n=45

	Mehleh True	Sohte mehleh False
54. Tohn kousoan en Dehpehk oh Takaiau kak laid nan wasahn nahk Community members are allowed to fish in the MPA	9%	91%
55. Irail kan me pahn kawehla kosoned kan pahn kak en selidi de pwain ma re kawehla kosoned People who break the rules of the MPA can be fined or arrested	96%	4%
56. Irail soumwas akan te me kak laidih wasahn nahk en Dehpehk oh Takaiau The chief can fish in the MPA	2%	98%
57. irail soun apwalih wasahn nahk en Dehpehk oh Takaiau te me pahn kak laid ih wasahn nahk Only CCOs can fish in the MPA	2%	98%
58. Sohte mweimwei rikada rahr sang nan wasahn nahk en Dehpehk oh Takaiau It is not ok to take coral from the MPA	84%	16%
59. Saik menihke nan wasahn nahk en Dehpehk oh Takaiau sohte mweimwei [n=44] Taking sea cucumbers from the MPA is allowed	86%	14%

60. Mie pak ke kilangada aramas arail lalaihd nan wasahn nahk en Dehpehk oh Takaiau nan irair en sounpar 5 samwalahro? Have you observed poaching within the MPA within the past five years? n=57

- a. Ei Yes (go on to next question) 11% (6)
- b. Soh No (skip to Q# 63) 81% (46)
- c. I sehse I don't know (skip to Q# 63) 9% (5)

61. Ia wen wekidekla kan me mie me pid laihd nan wasahn nahk? How has poaching changed in the past five years? n=6

- a. Lapalahn malaulaula Decreased greatly 83% (5)
- b. Ekis malaulaula Decreased a little 17% (1)
- c. Duduwehte About the same 0%
- d. Ekis tohtohla Increased a little bit 0%
- e. Lapalahn tohtohla Increased a lot 0%

62. Dahme ke pahn wia ma ke kilangada aramas arail lalaihd nan wasahn nahk? (What do you do if you see someone fishing within the MPA? **(Don't read out options. Circle as many as apply)** n=57

- a. Pakairehng Soumas Report to chief 44% (25)
- b. Pakairehng ohpis en Fish and Wildlife Report to Fish and Wildlife 19% (11)
- c. Pakairlehng ohpis en CSP Report to CSP 16% (9)

- | | | |
|-----------------------------|---|----------|
| d. Pakairehng ohpis en wehi | Report to municipal government | 35% (20) |
| e. Sohte mehkot I pahn wia | Do nothing | 2% (1) |
| f. I sehse dahme I pahn wia | I don't know | 14% (8) |
| g. Ehu soahng tohror | Other: inform CCO 12% (7); tell them to leave | 14% (8) |

63. Ke wehwehki irepen wasahn nahk en Dehpehk oh Takaiau? Do you know the boundaries of the MPA? *(If yes, go to next question, if no, skip to Q#65)* n=57

- | | | | |
|-----------|----------|-----------|----------|
| a. Ei Yes | 72% (41) | b. Soh No | 28% (16) |
|-----------|----------|-----------|----------|

64. Komwi kak idihiada irepen wasahn nahk nan map wet Please identify the boundaries on the map *(show map and ask them to point out boundaries)* n=41

- | | | |
|--------------------|---------------------------|----------|
| a. Pwung douluhl | Got it totally correct | 73% (30) |
| b. Kerenieng pwung | Got it kind of correct | 12% (5) |
| c. Sapwung | Could not show boundaries | 15% (6) |

65. Komwi kin iang patehng epwelpen wasahn nahk? Are you involved in the management of the MPA? n=57

- | | | | |
|-----------|----------|----------------------------------|----------|
| a. Ei Yes | 49% (28) | b. Soh No (If no, skip to Q#68) | 51% (29) |
|-----------|----------|----------------------------------|----------|

66. Ma ei, ia mwomwen ahmw kin iang patehng ? If yes, how are you involved in the management MPA? *(Do not read options. Circle all that apply)* n=28

- | | | |
|---|--------------------------------------|----------|
| a. Ngehi emen souhn apwalih. | I am a CCO | 39% (11) |
| b. Kin iang patehng tuhpen kan | I attend meetings | 71% (20) |
| c. Kin iang patehng dawih | Monitor/survey resources | 18% (5) |
| d. Kin iang pakairki ma aramas laid loale | Report illegal activities/violations | 14% (4) |
| e. Kin iang kasukulih tohn kouson kan | Educate fellow community members | 25% (7) |
| f. Ehu tohrohr: _____ | Other | 0% |

67. Ia wen ansou me tohn tehnpas wet kin iang patehng ni epwelpen kepikip kan? How often do the members of your household participate in management planning and decision making related to resource management? n=28

- | | | |
|-------------------|--------------|----------|
| a. Sohte pak ehu | Never | 4% (1) |
| b. Ekei pak | Sometimes | 61% (17) |
| c. Kalapw patehmg | Frequently | 29% (8) |
| d. Sohte wehwehki | I don't know | 7% (2) |

68. Ia ahmw pepehm ohng pweidahn doadoahk kan me miehler nan wasahn nahk en Dehpheh oh Takaiau? I will now ask you about your thoughts about the effectiveness of MPA management.
n=57

	Sohte pweida Not effective	Ekis pweida Kind of effective	Pweida laud Very effective	Sohte ese I don't know
69. Kasukuhl de kamarain Outreach and Education	5%	53%	25%	18%
70. Kakehlaka kosonned Enforcement	7%	49%	23%	21%
71. Petehkpen wasahn nahk Community enforcement	3%	49%	23%	25%
72. Elen kairada kohiek ohng tohn kouson Training opportunities for community members	11%	42%	21%	26%
73. Ehu tohrohr Other	0%	0%	0%	0%

74. Mie wekidekla mwurin wasahn nahk en Dehpheh oh Takaiau eh kokouda? Have you observed changes in resources since the MPA was established? n=57

- a. Ei Yes (If yes, go onto next question) 56% (32)
- b. Soh No (If no, skip to question #76) 25% (14)
- c. I sehse I don't know (Skip to question #76) 19% (11)

75. Iahnge wekidekla kan me ke kasawihada nan wasahn nahk? What changes have you observed: **(Do not read options. Circle all that apply)** n=32

- a. Mwahmw en tungoal tohtohla More fish to eat 84% (27)
- b. Mwahmw en tungoal malaulaula Less fish to eat 9% (3)
- c. Mwahmw en netila tohtohla More fish to sell 28% (9)
- d. Mwahmw en netila malaulaula Less fish to sell 0%
- e. Mour en kepikipik kan mwahula Better marine resources 31% (10)
- f. Mour en kepikipik kan sakanakanla Worse marine resources 0%
- g. Ehu tohror: _____ Other Less fishing ground 3% (1); no fish moving to our side 3% (1)

Ia wen mehn karoason kan me komwi kin ketkihsang paliomoar oh paliesed? How would you rate the availability of local food coming from and sea and land?

	Sohte Nothing at all	Ekis Little	Ekis laud Some	Laud A lot	Sohte wehwehki Don't know

76. Paliomoar Food from the land n=57	0	0	7% (4)	9% (5)	84% (48) *confusion about this question
77. Paliesed Food from the sea n=56	0	2% (1)	37% (21)	32% (18)	29% (16)

78. Mieier plan en dodoahk en epwelpen wasahn nahk en Dehpehk oh Takaiau? Is there an existing management plan in Dehpehk and Takaiau? n=57

- a. Ei Yes 32% (18)
- b. Soh No 12% (7)
- c. I sehse I don't know 56% (32)

79. Songen project en paliesed dah me konehng tohn kouson en Dehpehk oh Takaiau en sapwelimanki?

What alternative livelihoods do you think can be considered for Dehpehk & Takaieu? (**Do not read options. Circle all that apply**) n=57

- a. Mwetin lihmw Sponge farming 47% (27)
- b. Mwetin rahr Coral farming 30% (17)
- c. Mwetin Oaloahd Seaweed farming 28% (16)
- d. Kamwerin pworinmomw Rabbitfish 18% (10)
- e. Pali en tourist Tourism 11% (6)
- f. Ehu soahng tohrohr: Other: Govt employment 5% (3);
- g. I sehse I don't know 40% (23)

80. Songen sawas da me anahn pwe en sowese project en paliesed me konehng tohn kousoan en Dehpehk oh Takaiau en sapwelimanki? What resources are needed to assist with alternative livelihood options? (**Circle all that apply**) n=57

- a. Sawas en mwohni Financial support 35% (20)
- b. Sawas en kasukuhl Training 33% (19)
- c. Sawas en dipwisou en dodoahk Materials and supplies 32% (18)
- d. Sawas sang rehn semen kan Expert guidance and support 21% (12)
- e. Ehu soahng tohrohr Other: water system 5% (3)
- f. I don't know 30% (17)

81. Komwi wewehki dahkot Micronesia Challenge? Are you aware of the Micronesia Challenge? (**If yes, continue, if no, end survey here**) n=57

- a. Ei Yes 4% (2)
- b. Soh No 96% (55)

82. Ma ei, iahnge kosondi 2 me pato pahn Micronesia Challenge? If Yes, what are the two major goals of Micronesia Challenge? n=2

- a. Nahk percent 20 en paliomoar oh percent 30 en paliesed. To protect 20% of terrestrial resources and 30% of marine resources 50% (1)
- b. E pidada duwen epwelpen kepikipik Something to do with conservation 0%
- c. Sehse Does not know 50% (1)

83. Komwi utung Micronesia Challenge? Do you support the Micronesia Challenge? n=2

- a. Ei Yes 100% (2)
- b. Soh No 0%
- c. I sehse Unsure 0%

THANK YOU VERY MUCH!